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HAVING been allowed to run its damaging course for nearly six months, the illness of the London printing industry has now passed its second crisis and seems to be ending. In expressing once more our deep regret at being prevented from meeting so many obligations in the past few weeks, we must also thank readers, contributors, and advertisers for the understanding they have shown. We look forward to rapid recovery of full function.

The Kidney and Cardiac Œdema

CARDIAC œdema cannot be satisfactorily explained by filtration of fluid from capillaries subjected to a slight rise in internal pressure. ALTSHULE [1] pointed out that the extent of cardiac œdema was in no way related to the height of venous pressure, while RAY and BURCH [2] found that the œdema which followed ligation of the inferior vena cava tended to clear up despite a sustained rise in venous pressure in the feet. Such factual observations have led to a search for some other factor, and attention has been diverted to the kidney.

BORST [3] in 1938 remarked that in the circulatory collapse which follows hæmatemesis the kidney retains salt with such avidity that infused saline may raise the plasma-chloride as high as 20% above normal: severe hæmatemesis is known to reduce the kidney blood-flow.[4] MERRILL [5] showed that in cardiac failure, too, the kidney blood-flow is reduced, often very grossly, and this reduction is associated with excessive retention of sodium by the kidney. MOKOTOFF and his associates [6] thought that the decreased glomerular filtration accompanying this diminished blood-flow might account completely for the decreased salt elimination. FEJFAR and BROD [7] support MOKOTOFF's hypothesis, citing the idea put forward by WESSON and his colleagues [8] that, while 85% of salt absorption takes place in the proximal tubules, reabsorption of the remainder is subject to quantitative regulation in the distal tubules. In the distal tubules sodium chloride is absorbed at a fixed maximal rate; reabsorption increases with slow passage of a small amount of glomerular filtrate and decreases when the fluid being filtered is larger in quantity and therefore moves faster. LOWE [9] suggests that the salt retention associated with cardiac œdema should be subdivided into two groups. First there are the cases in which salt excretion continues on a low dietary salt intake, so that by dietetic means alone œdema may be slowly eliminated. In the second group mercurial diuretics are necessary to reduce salt and water reabsorption by the kidney and thus to get rid of œdema. In cases belonging to this second group LOWE found an excessive amount of antidiuretic hormone in the urine. BERCU et al. [10] have also noted antidiuretic effects following the injection into hydrated dogs of urine from patients with cardiac failure; but they thought that these effects were not due to a substance with the characteristics of 'Pitressin.' It would certainly appear that diminished renal blood-flow and glomerular filtration in heart-failure do not, by themselves, account for the decreased salt elimination; hormonal factors are almost certainly involved. BORST's observations of excessive salt retention [3] can be explained only by some profound alteration in the reabsorptive activity of the tubule cells.

The mechanisms of reduced kidney blood-flow and other changes in kidney function in heart-failure are still mysterious. BROD and FEJFAR [11] have made a valiant effort to solve the problem by observing nocturnal changes in cardiac output and kidney function, both in normals and in patients with heart-failure. It is known that at some stages of cardiac failure diuresis may take place during the night; but BROD and FEJFAR were unfortunate in that very few of their patients reacted in this way. When diuresis did occur it was usually accompanied by an increase in kidney blood-flow which simply indicated reversal of the daytime diversion of blood from the kidney to other tissues. Fluctuations in kidney blood-flow could not, however, be correlated in any way with changes in cardiac output, right auricular pressure, or other hæmodynamic measurements made at the same time. There was no relation between salt retention and venous pressure, such as might have been expected from BORST's [12] suggestion that salt retention contributes to the venous-pressure rise in cardiac failure. Reduction in renal blood-flow and in elimination of salt is not confined to cardiac failure; it may be found in normal subjects during exercise.[13 14] It has been suggested that in cardiacs reduced kidney blood-flow may be determined by venous congestion,[15] but KATZ and his colleagues [16] have now shown that this effect is shortlived; in dogs, after a few days of sustained chronic renal congestion kidney function has returned to normal in respect of water and salt absorption. Since there does seem to be a rough relation between reduction of renal blood-flow and the degree of clinical cardiac failure [11] it might be thought that anoxia contributed to these renal reactions. AAS and BLEGEN,[14] however, have shown that both in normal subjects and in patients with cardiac failure kidney blood-flow is *increased* by inhalation of 9·5% oxygen; but this, of course, may not reproduce exactly the anoxic mechanisms in heart-failure. It is difficult to avoid the teleological suggestion that the kidney blood-flow is reduced by splanchnic vasoconstriction when a generally inadequate cardiac output is partitioned in the interests of other more vital organs.

The importance of the kidney in cardiac failure is established. Its blood-flow may be grossly impaired, and almost certainly further factors—humoral or hormonal—exaggerate the activity of tubule cells in the retention of salt. The place of pituitary and suprarenal cortical hormones in this picture is still ill-defined. Mercurial diuretics act primarily by depressing salt and water retention by the kidney. PUGH and WYNDHAM [17] have demonstrated secondary beneficial consequences of

1. Altshule, M. D. *Medicine*, 1938, **17**, 75.
2. Ray, C. T., Burch, G. E. *Arch. intern. Med.* 1947, **80**, 587.
3. Borst, J. C. G. *Acta med. scand.* 1938, **107**, 68.
4. Black, D. A. K., Powell, J. F., Smith, A. F. *J. Physiol.* 1941, **99**, 344.
5. Merrill, A. J. *J. clin. Invest.* 1946, **25**, 389.
6. Mokotoff, R., Ross, G., Leiter, L. *Ibid*, 1948, **27**, 1.
7. Fejfar, Z., Brod, J. *Quart. J. Med.* 1950, **19**, 221.
8. Wesson, L. G., Anslow, W. P. *Amer. J. Physiol.* 1948, **153**, 465.
9. Lowe, T. E. *Med. J. Aust.* 1950, ii, 497.
10. Bercu, R. A., Rokaw, S. N., Massie, E. *Circulation*, 1950, **2**, 409.
11. Brod, J., Fejfar, Z. *Quart. J. Med.* 1950, **19**, 187.
12. Borst, J. C. G. *Acta med. scand.* 1948, suppl. 207.
13. Kattus, A. A., Sinclair-Smith, B., Genest, J., Newman, E. V. *Bull. Johns Hopk. Hosp.* 1949, **84**, 344. Blegen, E. *Scand. J. clin. lab. Invest.* 1949, **1**, 298.
14. Aas, K., Blegen, E. *Scand. J. clin. lab. Invest.* 1949, **1**, 22.
15. Blake, W. D., Wegria, R., Keating, R. P., Ward, H. P. *Amer. J. Physiol.* 1949, **158**, 1.
16. Hwang, W., Akman, L. C., Miller, A. J., Silber, E. N., Stamler, J., Katz, L. N. *Ibid*, 1950, **162**, 649.
17. Pugh, L. G. C., Wyndham, C. L. *Clin. Sci.* 1949, **8**, 11.

mercurial diuresis on the heart output and venous pressure in heart-failure; and mercurial diuretics, combined with low salt intake, thus assume a new importance in the management of the cardiac invalid. One of the many unanswered questions is why mercurial diuretics are phenomenally successful in some cases but fail miserably in others.

The N.H.S. Through American Eyes

THE advertising campaign launched by the American Medical Association on Oct. 8 marks the climax of a "national education program" intended to mobilise public opinion against the compulsory health insurance proposals now before Congress. This appeal to the American people through the press and over the radio was expected to cost the A.M.A. about $1,100,000, obtained by a levy of $25 on every member of the association; but its total cost was very much greater, and the value of the advertising space provided by banks, insurance companies, drug stores, and other interested concerns has been estimated at $19 million.[1] The object of the campaign is twofold. It is designed to make the public "health insurance conscious" by extolling the virtues of voluntary schemes, and simultaneously to "alert the American people to the danger of socialised medicine and to the threatening trend towards state socialism in the U.S.A."[2]

Naturally enough, a great deal is being said in America about the condition of British medicine, whose less satisfactory features are held to be the result of carrying compulsory health insurance to its logical conclusion. A delegation of the A.M.A. which visited the United Kingdom last year[3] attribute "the decay of medical practice in England" partly to National Health Insurance but more particularly, it seems, to the National Health Service Act. After reviewing the events which led up to the inauguration of the service, and surveying its "cumbersome" administrative machinery, the delegation proceed to examine its three main sections—hospital, public health, and general medical.

The British specialist is said to be working short hours for good money but to be paying for this privilege with his freedom and to be "as surely chained to his post as though he were bound by visible shackles." None the less this same specialist is in the habit of leaving an out-patient session as soon as his time is up, regardless of the number of patients waiting to see him. Our hospitals are handicapped by chronic overcrowding, their efficiency is decreased (*sic*) by an occupancy-rate of 90–95%, and they are being inundated with minor cases which make them unable to care for patients who are seriously ill. Further, their running costs are stated to be excessively high, and the visitors found an independent hospital which operated at about two-thirds the cost of a similar nationalised one. In general, the quality of hospital work is suffering and there is an increasing tendency to substitute laboratory investigations for clinical observation. Turning to the local health services, the delegation remark on the breakdown of school dentistry, and on the multiplicity of agencies concerned with maternity and child welfare. The ambulance and car services, while admirable in spirit, are being abused by all concerned, and thousands of patients, with attendants, are being "hauled around all parts of England." The tuberculosis services have suffered from the division of responsibility which followed from the Act, and "5000 sanatorium beds and hospital beds have become unavailable because of lack of funds and personnel." Finally, as might be expected, the delegation were particularly impressed by the plight of the general practitioner. They found him trying to cope with more patients than he could treat satisfactorily, and consequently referring more and more cases to the hospitals from which he himself was virtually excluded. The report continues:

> "The general practitioner in Great Britain as we observed him is no longer a free, independent professional person. He finds himself sharply circumscribed in function, in influence and in outlook. His work tends to become more superficial as he is increasingly concerned with clerical and technical trivialities. . . . The correction of present defects will depend on a reappraisal of the function of the family doctor and his reestablishment as the backbone of medical service to the population at large."

Commenting on the health service as a whole, the delegation take the view that it is designed to establish "not a better system of medical care, but a better controlled one." In so doing it has widened the gap between specialist and general practitioner, has aggravated the already great geographical inequality of distribution of doctors, and has added greatly to the cost of medical care. The middle-income group, who were accustomed to paying their way, have benefited; but the low-income group received as good or better medical care before the Act. All in all, the concept of medical care without direct payment by the consumer is held to be fundamentally unsound.

The opinions of these experienced American observers are not to be lightly dismissed, and some of them are of course widely shared by doctors in this country. At the same time, we must remember that we are being measured against the standards of the richest country in the world. It is true, as the Americans are not slow to point out, that the cost of our nationalised service has far exceeded the estimates; yet even today the annual cost is only about £9 per capita, whereas the average annual expenditure on medical care in the U.S.A. is reported to be about $70 per person[4]—equivalent to £25 at the present rate of exchange. (These figures are stated to represent 4% and 4·9% respectively of the national incomes in the two countries.) All agree that the general practitioner's work suffers from the inflated lists which are still common, but we know of no evidence that overcrowding caused by the N.H.S. is leading to a fall in the standards of medical care in the hospitals, or that consultants are tending to leave "on the dot" because they are paid for sessions of so many hours. Many of the bad points of our medical services—and we know that they are numerous—have been developing for a generation and cannot fairly be put down to the National Health Service Act, which, if it has not halted the trend, has certainly not accelerated it. The American delegation observe:

> "The system that prevails in England today is certainly not all bad, but most of its virtues are those of the medical social service that existed before the Act."

We should prefer to say that the system is certainly not all good, but that many of its faults are those of the medical social services that existed before the Act.

1. *New York Times*, Sept. 17, 1950.
2. *J. Amer. Med. Ass.* 1950, **143**, 744.
3. *Ibid*, p. 1420.

Annotations

THE NOBEL PRIZEMEN

THE 1950 Nobel prize for medicine goes to Dr. Philip S. Hench, Prof. Edward C. Kendall, and Prof. Tadeus Reichstein, "for their discoveries concerning the suprarenal cortex hormones, their structures and biological effects." Professor Kendall, who is a true pioneer of biochemistry, produced some thirty years ago, from several tons of thyroid gland, a few milligrammes of crystalline thyroxine, thus bringing the thyroid principle from the nebulous and indeterminate land of animal extracts into the realm of pure organic chemistry. Long years' research on suprarenal hormones led to the isolation in 1935, among other chemically pure substances, of Compound E, or 'Cortisone.' To Kendall's friend Dr. Hench, of the Mayo Clinic, goes the credit for introducing cortisone

4. Goldmann, F. *New Engl. J. Med.* 1950, **243**, 36.

into clinical medicine—not yet as a form of treatment (for he is careful to deny it this status) but as a means of modifying disease processes many of which were previously regarded as unrelated. The medical world can be grateful for the care with which the Mayo Clinic work was begun and has been continued; but not even Dr. Hench's wise caution can obscure what seems to be the dawn of another new day in therapeutics. To this sunrise in the Middle West, investigators elsewhere have of course contributed; and all who study steroid hormones will be glad to see Reichstein's name joined with those of Hench and Kendall. Professor of pharmaceutical chemistry at Basle, he has devoted most of his life to steroid substances; and cortisone was among the 28 hormone substances he is said to have isolated from the suprarenal gland in four years' intensive research. His investigations on the steroids of plants have enabled him to indicate possible means of converting them into cortisone.

PAIN IN MYOCARDIAL INFARCTION

WITH infarction of the heart, diagnosis has far outstripped prognosis. An attempt to put prognosis on a surer footing has therefore been made by Behrmann and his colleagues,[1] who have studied the relation between pain and mortality in 150 cases, among which the mortality-rate during the first four weeks was 35%. They found that the mortality increased with the duration of pain: among patients whose pain lasted less than 5 hours the rate was 11%, but it rose to 34% when the pain lasted 5–25 hours and to 39% with pain for 25–120 hours. As to the site of pain, among the 44 patients in whom it was confined to the anterior trunk the mortality-rate was 59%, whereas among the 95 with pain radiating beyond the anterior trunk the rate was only 18%. This rather surprising observation—that patients with pain confined to the anterior trunk are more likely to succumb—has been recorded previously[2]; and Behrmann and his associates suggest that in patients with a large infarct which proves fatal, profound shock may cause dulling of the sensorium and a diminution in the "overflow phenomena of impulses which are apparently a part of the picture of referred pain."

This study demonstrates once again the variability in the mode of onset—a feature further underlined by Stein[3] in an account of 7 cases of myocardial infarction where chest pain was present only on exertion. The pain pattern was characteristic of angina pectoris, and it was only through serial electrocardiograms that the correct diagnosis was reached. In most of these cases, however, there were clinical features suggesting infarction. Thus, often the pain was severe; it began, quite suddenly, to come on with much less exertion than originally; and the response to nitroglycerin became less satisfactory. One of Stein's cases indicates that in a young adult anything like severe angina pectoris should arouse suspicion of infarction.

LIGHTENING THE N.H.S. DRUG BILL

DOCTORS in general practice who have tried to obey the Ministry's behests by prescribing *National Formulary* alternatives for proprietary or branded preparations are finding that some are unobtainable and likely to remain so for years because only the owner of the proprietary rights may make them. In other cases the wholesale chemists are producing the *N.F.* preparation under licence from the patentees, or they are buying the finished proprietary product from the makers and preparing it in accordance with *N.F.* requirements. Thus prescribing drugs in their non-proprietary forms does not always save the Treasury much money, however beneficial it may be to the prescriber's soul.

Another way in which money might be saved, with no loss of efficiency, is by reducing the waste of unused medicines. Thousands of bedroom and bathroom cupboards—many of them in doctors' houses—are bulging with half-empty bottles and boxes labelled "The Mixture" or "The Tablets" with the usual personal instructions about dosage. As a rule nobody can be certain what these medicines are or for what they were originally intended; so they can seldom be used again. In the end, at an extraspecial spring-cleaning, a move, or some more dismal occasion, they will be cast into the dustbin, or the bottles (unwashed) will be offered to the local pharmacist. The uninformative labelling is based on the traditional view that it is no business of the patient what he is taking—scoffers even call this the cornerstone of therapeutics—though nowadays, when the doctor usually hands the patient his prescriptions, only bad handwriting and natural inertia prevent his reading them. Continental pharmacists must copy the prescription in full on to the label of every medicament they dispense. If this practice was adopted here it would add considerably to the already heavy demand on pharmacists; but it would make it possible for household stocks of tablets, lozenges, and even standard mixtures to be used if the need for which they were ordered arose once more. And it would reduce loss of time and temper when a new patient produces the remains of "what the other doctor ordered."

That the nation's medicine bill is excessive was again emphasised last week by Sir John Charles,[1] chief medical officer of the Ministry of Health, when he addressed the annual meeting of the Executive Councils' Association of England. In the twelve months up to the last day of June, 211 million prescriptions were made out; and during the first six months of the year the average cost was 3*s.* 1½*d.* It is difficult, he declared, to believe that medicine drinking on this scale is of even temporary benefit to the nation's health. "Do we really need to breed a new race of three-bottle men and women?" Steps are being taken, he said, to help doctors to discourage the taking of medicines as a habit.

SUPPLIES OF CORTISONE AND THE NEW ANTIBIOTICS

IN a written answer to a parliamentary question, the Minister of Health has announced that limited quantities of 'Cortisone' are being imported for use in hospitals in this country, and that arrangements for production here will be considered as soon as possible. The amount produced must depend, however, on the supply of the essential raw material (ox bile), for which no substitute is likely to be found in the immediate future. 'Aureomycin', Mr. Bevan said, is already being imported, and the import of 'Terramycin' will be considered if the need arises.

Mr. Herbert Morrison, who as Lord President of the Council is the Minister responsible for the Medical Research Council, stated that an extensive programme of coördinated research on cortisone and related substances is being carried out by the council. The provision of cortisone for the routine treatment of patients is, of course, outside the council's province; but he was informed that more research was necessary before the drug could be safely recommended for general use in rheumatoid arthritis.

SYNERGISM AND ANTAGONISM OF ANTIBACTERIAL SUBSTANCES

A FEW years ago Ungar[2] and Bigger[3] showed that two antibacterial substances might act synergistically on bacteria in culture-media or serum. Ungar showed that the inhibitory effect of penicillin on staphylococci and streptococci was at least doubled by the presence of sulphapyridine in a concentration which per se was insufficient to exert any influence on the organisms. Bigger found that the presence of sulphathiazole in culture-media and serum greatly increased the dilution at which penicillin inhibited staphylococci. Clinically, there was some evidence that in pneumococcal pneumonia penicillin and sulphadiazine together were more effective than sulphadiazine alone.[4] Bigger[5] later investigated the activity of six antibacterial substances—sulphathiazole, penicillin, streptomycin, chloramphenicol, boric acid, and *p*-aminosalicylic acid—in pairs on *Bact. coli* in a synthetic medium. Thirty combinations of two of these substances are possible, and in all but five of these the two components acted synergistically; there was marked antagonism between boric acid and sulphathiazole, and between boric acid and penicillin. Antagonism also exists between penicillin and succinylsulphathiazole,[6] and between penicillin and chloramphenicol.[7] Spicer[8] has investigated the action of five antibiotics—'Aureomycin,' chloramphenicol, streptomycin, penicillin, and 'Bacitracin'—in pairs on a number of organisms. When the bacterial strain was sensitive to each of the pair the

1. Behrmann, J. H., Hipp, H. R., Heyer, H. E. *Amer. J. Med.* 1950, **9**, 156.
2. Rosenbaum, F. F., Levine, S. *Arch. intern. Med.* 1941, **68**, 913.
3. Stein, I. *Amer. Heart J.* 1950, **40**, 325.

1. See *Manchester Guardian*, Oct. 27, p. 10.
2. Ungar, J. *Nature, Lond.* 1943, **152**, 245.
3. Bigger, J. W. *Lancet*, 1944, **ii**, 142.
4. Dowling, H. F., Hussey, H. H., Hirsh, H. L., Wilhelm, F. *Ann. intern. Med.* 1946, **25**, 950.
5. Bigger, J. W. *Lancet*, July 8, 1950, p. 46.
6. Poth, E. J., Wise, R. I., Slattery, M. P. *Surgery*, 1946, **20**, 147.
7. Jawetz, E., Speck, R. S. *Proc. Soc. exp. Biol., N.Y.* 1950, **74**, 93.
8. Spicer, S. *J. Lab. clin. Med.* 1950, **36**, 183.

effect of the two together was either additive or synergistic. When an antibiotic to which a bacterial strain was only moderately sensitive was combined with one of high activity the action of the latter was either impeded or was the same as if it had been used alone.

The synergistic effect of two antibacterial substances is readily explained. If both interfere at the same stage in a metabolic cycle within the organism, their combined effects may be expected to be additive. If, however, their mode of attack on the organism is different, the organisms surviving the action of one become exposed to that of the second, so that the two antibiotics act synergistically. Antagonism between two antibacterial substances is not so easily accounted for. One possible explanation is that the first produces some change in the cellular structure or metabolic processes of the organism as a result of which the second is either prevented from penetrating the cell, or having done so is unable to exert its usual action.

In practice two antibacterial substances might more often be administered together. This delays the appearance of resistant strains; and favourable results have already been reported from treating tuberculosis with streptomycin and *p*-aminosalicylic acid together, and subacute bacterial endocarditis with penicillin and streptomycin together. There is some evidence, too, that a combination of sulphonamides, penicillin, and streptomycin controls *Hæmophilus influenzæ* better than any of these agents alone.[9]

PRACTITIONERS' LISTS

THE dispute over the remuneration of general practitioners[10] is closely linked with the question of how many patients a practitioner may have in the N.H.S. In his presidential address on Oct. 26 to the Executive Councils' Association of England, Dr. N. E. Waterfield urged that "in the great majority of cases satisfactory service cannot be given, or the objects of the Health Service attained, with lists of more than 3000." The following reasons, he said, were given in favour of keeping the maximum at 4000:

1. Under National Health Insurance a practitioner might have under his care a good many more than 4000 when dependants were added to the maximum of 2500 panel patients.
2. During the late war many doctors had as many as 6000 patients, and usually these doctors fulfilled their obligations.
3. Today patients are apparently satisfied with the treatment they get from doctors with large lists, and those to whom a transfer is suggested immediately make an outcry.
4. Limitation of lists means limitation of free choice of doctor.
5. With the existing capitation-rate a doctor cannot make a sufficient income without a list in the neighbourhood of the maximum—unless he has other sources of income.

Against this, methods of diagnosis and treatment are now increasingly elaborate, and arrangements for radiological and pathological examinations and for consultations with specialists occupy much more time than before the appointed day. Furthermore, Dr. Waterfield continued, if the new service is to be a real health service, the practitioner must educate the public about health; but obviously with 30–40 people attending morning and evening surgeries and about 20–30 visits a day—which a list of 4000 probably entails—little time can be given to education. Also the doctor must have time for reading and attending medical meetings, and for relaxation, amusement, and exercise.

How is a reduction to be achieved? If the maximum size of lists were reduced, practitioners could justly demand that incomes should be maintained by increasing the capitation fee. Without actually imposing a new limit, large lists could be discouraged by heavily loading the fee for the first thousand patients; but unless extra money were added to the remuneration pool the cost would fall on those who now have big lists. Loading after this fashion would bring some, though probably not enough, relief to those practitioners—mostly in residential areas—who are suffering hardship. Two months ago we suggested that doctors might be attracted to the urban under-doctored areas by grants from the Special Inducement Fund[11]; and Dr. Waterfield proposes that those who are in distress might be helped to transfer by a capital payment or an interest-free loan. This would enable them to earn a reasonable living and would make for a more rational distribution of medical man-power. But for both the practitioners and their families evacuation of their chosen places would often be a grim business.

9. Zinnemann, K. *Brit. med. J.* Sept. 23, 1950, p. 705.
10. See *Lancet*, Oct. 21, 1950, p. 483.
11. *Ibid*, Aug. 26, 1950, p. 327.

TUBERCULOUS PLEURAL EFFUSION

PLEURISY with effusion in patients under 40 is almost always tuberculous, but it used to be looked on as a mild and benign manifestation. Sibley's[1] study of 200 cases in a Canadian sanatorium suggests that these effusions should be taken more seriously and that many are associated with hæmatogenous spread. In 29 of the patients parenchymal lesions of the lung had preceded the effusion, 92 were found to have pulmonary lesions either at the time of their effusion or from a month to seven years later, and 10 subsequently developed clinically recognisable tuberculosis in other organs without involvement of the lungs; in addition, 37 patients developed lesions of hæmatogenous origin, the commonest sites being the genito-urinary tract, spine, peritoneum, and meninges.

Tubercle bacilli are rarely found in films and still more rarely cultured from the small amount of pleural fluid usually examined. But Barnwell[2] pointed out that by culturing a large volume of fluid, up to 500 ml., tubercle bacilli can be detected in about 70% of effusions from young people. Cytological examination may also help in diagnosis and should always be included. Lymphocytes usually predominate in tuberculous fluids, though a few show a leucocytosis in the early stages. MacMurray and colleagues[3] note that fluids with over 5% of eosinophils in their cell-count are sometimes associated with the late stages of tuberculosis but are never one of its early manifestations. Schwartz and Broadbent[4] aspirated fluid as soon as it was discovered in 7 patients with artificial pneumothorax, and 6 of the fluids contained 64–90% eosinophils. Eosinophilia may also be found in the pleural fluid in cases of lobar pneumonia, typhoid fever, asthma, Lœffler's syndrome, neoplasm of the lung, Bright's disease, and other conditions, but it should always raise a suspicion of tuberculosis. Tuberculous effusions mostly occur in patients with a high sensitivity to tuberculo-protein; so a negative tuberculin test will virtually exclude tuberculosis except in the extremely ill. A positive test, on the other hand, will not prove that the effusion is tuberculous, but will call for a full bacteriological and cytological examination.

DECISION POSTPONED

DELAYS outside the control both of the Government and of the General Medical Services Committee have prevented the collection of data required for reconsidering the remuneration of general practitioners. Accordingly the Annual Conference of Local Medical Committees last week recommended a further three months' postponement of the decision whether practitioners should leave the N.H.S. The special conference will be called as soon as the information is available, or next March, whichever is the earlier. It was generally agreed that if practitioners resign as a body from the service their withdrawal will not be effective unless they withhold certificates from patients wanting them for claiming National Insurance benefits.

Dr. Brock Chisholm, director-general of the World Health Organisation, who has been lecturing in the United Kingdom, said at a press conference last week that W.H.O. is a technical body which wages war on disease; he found it hard to justify "pacifism" on the part of any country in this common cause. There has been a great increase in public interest in all United Nations agencies since the outbreak of the Korean war, and five public-health teams, headed by Lieut.-Colonel Walter Crichton, M.B., have already been sent to Korea to advise on urgent problems of sanitation and on long-term reconstruction.

The centenary celebrations of Friern Hospital on Oct. 27 enabled visitors to obtain an impression both of the hospital's history and of its present activities. The austere exterior of the buildings has become increasingly misleading as the interior has been renewed and improved in the spirit of modern hospital care. Today, as Lady Archibald, chairman of the hospital management committee, pointed out, Friern is a modern hospital, just as it was 100 years ago when its foundation marked the transition from the old to the new attitude toward mental illness. Mr. Arthur Blenkinsop, parliamentary secretary to the Ministry of Health, congratulated the hospital upon its very high discharge-rate. He said that over a quarter of all loss of work is due to mental disturbance, and that 48% of the hospital beds in the country are devoted to these illnesses. Mr. Fred Messer, M.P., chairman of the North West Metropolitan Regional Hospital Board, remarked that the ambition of a mental hospital must be to enable its inmates to enjoy life to the fullest measure of which they are capable. The programme ended with the showing of a film, prepared by the physician-superintendent and his staff.

1. Sibley, J. C. *Amer. Rev. Tuberc.* 1950, **62**, 314.
2. Barnwell, T. B. Cecil's Textbook of Medicine. London, 1947.
3. MacMurray, F. G., Katz, S., Zimmerman, H. J. *New Engl. J. Med.* 1950, **243**, 330.
4. Schwartz, S., Broadbent, M. *Trans. Amer. climat. (clin.) Ass.* 1940, **55**, 96.

Medical Societies

ROYAL SOCIETY OF MEDICINE

Medical Education

AT a meeting of the section of medicine on Oct. 24, with Dr. CHARLES E. LAKIN, the president, in the chair, Mr. ROBERT BIRLEY, headmaster of Eton College, expressed strong dissatisfaction with the 1st M.B. examination. It had, he said, a great influence on secondary education, on the selection of doctors, and on the medical profession itself. It set a great problem to school authorities, and whenever two or three headmasters were gathered together it was on the cards that they were discussing medical education. References to the 1st M.B. in the B.M.A. report on the medical curriculum, with whose views he was wholly in agreement, were almost too optimistic, for at the moment matters were getting worse rather than better. Mr. Birley was strongly of the opinion that boys and girls should have a more general and less specialised education, but the inevitable influence of 1st M.B. was in the opposite direction. It was a source of amazement to him that in 1948 only about 13% of external candidates for the London University 1st M.B. passed the examination[1]; there must be something very wrong either with the examination or with the candidates. It might appear to be impossible to say for certain which was at fault, but it was significant that of 41 boys and girls carefully selected for admission by University College, London, from some 300 candidates, only 23 subsequently passed their 1st M.B. and so qualified for admission. This cast grave doubt on the merits of the examination, which nevertheless was a major factor in deciding who were to be the country's doctors in the future.

Mr. Birley then turned his attention to the syllabus, which he thought was getting out of hand. The examination put a premium on the mastery and memory of facts. Historically, it was a university examination, but there was an increasing tendency for it to be taken at school. At Cambridge, for instance, some colleges now insisted that all four parts be taken before going up; others merely indicated that this was preferable. The university medical faculty had been mainly responsible for this by abandoning all premedical instruction. Further figures from University College, London, showed that of 41 students for the 2nd M.B., 18 had taken two years, 19 three years, and 4 four years from school certificate to obtain 1st M.B.[1] The general effect of the examination had been that school certificate was taken earlier and earlier—it was not the only factor involved in this general tendency—and that the teaching of subjects other than those needed for the examination was restricted. The great question was whether a boy should take 1st M.B. late (i.e., in whole or the greater part at the university) and have a wider general education, or whether he should take it early at the expense of other subjects. Economic pressure worked in favour of the latter solution, but Mr. Birley was strongly in favour of the former, and he cited the arrangements at the Berlin-Charlottenburg Technical University, where all students spent their first year on general studies, with the consequent necessity of an extra year at the university, as an example of how boldly this problem was being tackled abroad.

THE CURRICULUM

Sir BENRY COHEN pointed out that the 1886 Medical Act had laid down that the standard of proficiency demanded in the qualifying examination should be sufficient "to guarantee the possession of the knowledge and skill requisite for the efficient practice of medicine, surgery, and midwifery." At that time, with the limited medical knowledge that existed, the curriculum fulfilled this purpose. Now the enormous expansion of medical knowledge made it necessary to restate the aims of the curriculum: its purpose must be to show the student the scope and potentialities of medicine, to equip him with sound basic principles and indispensable techniques, and to give him resourcefulness and initiative. The general structure of the curriculum should, however, be retained. He agreed that the 1st M.B. examination was at present unsatisfactory, and he suggested in the interests of general culture that when two of its subjects had been taken at school the remaining subject should be studied during the first university year; at the same time the student should be allowed to attend without fee any other courses he chose in the university. This was the practice in Liverpool. The preclinical course should teach the normal structure and function, including normal psychology, of human beings, and should also impress on the student that he was a member of a family and of society. Continuity of the preclinical and clinical years was vital, and the elimination of the concept of disease entities in favour of "departures from normal structure and function and their causes" would promote such continuity. Basic principles were more important than factual information though of little value without practical illustrations. As an example of general principles, Sir Henry remarked that "the intensity of symptoms is proportional to the rate of pathological change," and enlarged on this theme. It must always be remembered that the curriculum could never be final; there must be continual adjustment and a flexibility suited to the teacher as well as the taught. Students should be encouraged to question authority and to study the meaning of the words used by their teachers—words which so often were a cloak for ignorance. The teachers for their part must never forget the importance of intellectual honesty and must emphasise the human side of medicine throughout the training. The central aim of the curriculum was to prevent the practitioner from being taken by surprise.

1. See Johnson, M. L. *Lancet*, 1949, ii, 529.

GENERAL PRACTICE

Dr. G. O. BARBER recalled the medical education he had received twenty years ago, and paid tribute to the teachers who had given him a sound knowledge of medicine and surgery. None the less, he and his contemporaries had met great and unexpected difficulties when they tried to adapt their hospital training to general practice. Why should this be so? What were the differences between hospital medicine and general practice? They were, firstly, that a general practitioner had to look after the whole patient in his environment; secondly, that he had to do so without the facilities of a hospital; and, thirdly, that his cases were unselected and he must constantly be on the alert to distinguish major from minor disorders. There were two diametrically opposed ways of providing a community with medical care. It might be provided through large hospitals, with all their facilities, or it might take the form of care in the patient's own home. Dr. Barber believed in the latter arrangement and held that the general practitioner should be the instrument of its realisation.

Turning to medical education, he observed that all teaching could take the form of dogmatic instruction or of practical demonstration; the second was the accepted scientific method. Twenty years ago he and his generation had been turned out into general practice to sink or swim, and there was no doubt that patients had suffered. The young man of today must be guided into general practice, and this was in fact being done at one of the London hospitals, where for fifteen years an attempt had been made to prepare the student for this work. The course—for such it was—comprised a series of talks by a practitioner on everyday problems and on the common ailments which form 90% of the work; visits to a practice in action to meet the dispenser, district nurse, health visitor, and other auxiliary workers; and a film-strip of daily work in general practice. Students were also invited to stay a few days on the premises and accompany the practitioner on his rounds and in his surgery. This course was well attended and was meeting a very real need.

From Letters to the Editor

Transvesical Prostatectomy.—The operation of transvesical prostatectomy described by Mr. Lee in your issue of Sept. 23 is essentially that first described by Thomson-Walker in 1928, except for the primary closure of the bladder, which, as Mr. Lee says, is now possible because of antibiotics rather than improvements in technique.

As he points out, one of the major difficulties of the operation is the control of hæmorrhage. In a transvesical operation hæmorrhage is most readily controlled by the technique originally described by Wilson Hey and later modified by the Liverpool school. (This technique has been admirably described by Stock (*Brit. J. Urol.* 1947, **19**, 206).) By this method it is possible to obtain an excellent view of the whole prostatic fossa and to pick up and either tie or diathermy all bleeding-points under direct vision, thus eliminating all need for gelatin sponge or other hæmostatic agent.

In retropubic prostatectomy Millin has controlled hæmorrhage by injecting under the prostatic capsule 0·5 ml. of 'Pitressin' in 20 ml. of 1% procaine. I have found that

this method can also be used successfully in transvesical prostatectomy by introducing the solution through the bladder wall at the junction of the prostate and the neck of the bladder.

Transvesical prostatectomy undoubtedly has its place; but in my experience 70–80% of prostates, including most of those weighing 20 g. or more, are removed most easily and with the most complete control of hæmorrhage by the retropubic route. The transvesical route, with its relatively more difficult visualisation of the prostatic fossa, is reserved for the medium-sized gland which is fibrous or infected. This route permits of complete diathermy dissection of firm adhesions—a type of case in which manual removal by the retropubic route usually involves such force that the incision in the capsule is excessively torn. The small fibrous and the irremovable malignant glands are, of course, treated perurethrally.

As regards antibiotics, in the urological fields there is every reason for using "blunderbuss" methods. All my cases are treated under an umbrella of sulphonamides, penicillin, and streptomycin. Streptomycin is known to act very quickly, and unless infection is already present I cannot see the value of administering it, as Mr. Lee does, for three days before operation. I give the first dose with the preoperative medication and continue it for five days postoperatively (the catheter being removed on the second to fourth day); in this way the maximum effect is obtained at the crucial period.

Finally, I must disagree about the necessity for vasotomy. In the past two years, of nearly 150 cases on which I have operated, only 1, with a grossly infected prostate and bladder, has had a vasotomy. Only 2 other cases showed any epididymitis—both due to proteus infection, and both before streptomycin became generally available.

Even a relatively soluble product like gelatin sponge, if wrapped round the balloon of a Foley catheter, is partly isolated from the antibiotics excreted in the urine and will thus harbour infection around the torn ends of the ejaculatory ducts and permit retrograde infection. This applies also to a Foley catheter alone if the balloon is fully inflated.

The methods described here so reduce postoperative hæmorrhage that there is no necessity to introduce foreign bodies into the prostatic fossa, and epididymitis has become a thing of the past.—A. M. MCMASTER, F.R.C.S.E. (Rochdale.)

The Food We Eat.—Sir Andrew Aguecheek complained that his wit had suffered through eating too much beef: Dr. Thrower (Oct. 21) blames lack of protein for our laziness. An experience of my own seems relevant. Four years ago, when the disparity of diets was greater than it is now, I spent some months working in a pathology department in Switzerland. With fat and protein in abundance, I soon found myself living, as my colleagues did, on two enormous meals a day. The time wasted here on breakfast, elevenses, tea, and nightcap all were gained, at first sight, for work. But equally soon I found that at the very least two full hours were needed to eat and recover from a midday meal of Swiss dimensions; because of this, in spite of starting at 8 A.M., the hours of actual work put in at that Institute were exactly the same in sum as they are at home. Little and often keeps the belly light and the head clear.—BERNARD LENNOX, M.D. (Postgraduate Medical School of London, W.12.)

Distinction Awards.—I suggest that the Royal Medical Benevolent Fund would be an excellent recipient of the money from the distinction awards. On being informed that one of these had been given to me, my first intention was to return this money to the Ministry of Health. This, though satisfying to one's amour-propre, is, really, an empty gesture. The Ministry merely provides the machinery through which these awards are made on the suggestions and recommendations of our own profession. Some of us at an early stage considered that distinction awards would be a most remarkable and distasteful method of remuneration, and protested against it. We were then told that money had been laid aside for this purpose and could not be used in any other way—in fact that the whole system was already a fait-accompli. A feeling of inertia is apt to come over one in face of such statements, but I suggest that we are not powerless or incapable of finding some other way of making use of this money for the benefit of the medical profession as a whole. There is surely no better way than to aid our less fortunate colleagues and their dependants, nor any better organisation through which to do this than the R.M.B.F.

The shamed secrecy with which these awards are surrounded compels me to adopt anonymity, so I sign myself, like the awards—"A.B.C."

In England Now

ONE returns from Stratford refreshed by the sight of a countryside steeped in English history and bathed in autumnal beauty; and grateful for the opportunity to re-examine a fragment of Will Shakespeare's mind, for he was not only a poet and playwright but also a kindly philosopher, keenly aware of, and pondering with vast intelligence and sympathy, all those problems of conduct in divers circumstances that afflict mankind. This year's feast included *Julius Caesar*, *Henry VIII*, *Much Ado*, and *Measure for Measure*. In all four the production, scenery, lighting, and décor were worthy of the author; only the acting left something to be desired—much of this, I thought, barely achieved mediocrity, though a better Pompey and Dogberry than those of Mr. George Rose I do not hope to see. But how this fashion of underplaying has taken hold of our young actors! Some of them, in their zeal to throw away lines, come near to throwing away the whole play. The baby, were it not too magnificently robust, would follow the bath water. Mr. Quayle's Henry VIII, though it looked more Holbein than Holbein, disappointed by its childish petulance. Instead of a great and awe-inspiring figure, the king became merely an enfant terrible, more likely to damage the furniture than shape the course of history.

* * *

"Many women are convinced that the onset of the 'change' marks not only the end of the child-beating period but . . . the end of her natural desire," says a helpful little pamphlet I received this morning. The many children who have based their hopes of a beating-free adolescence on the same theory will be sad to hear that "this is definitely not the case."

* * *

"Are one-eyed people seasick?" asked a peripatetic colleague the other week. My friend J, the most determined man I know, has sailed small yachts for 30 years, and to him the joy of the game is in leaving one port and reaching another; the time between has always been a nauseous yellow-green hell. In 1914 he defeated the medicos at his third attempt by learning the Snellen types by heart; he is that sort of man. By grim poetic justice a sniper's bullet went in at his left eye and emerged through his right ear. Yet four years later he was sailing again, and he has gone on ever since. So has his seasickness. On our last trip together he brought half a dozen bottles of "apple champagne," convinced that this would cure him. The bottles remained unopened, for when one is feeling sick there is nothing worse than the smell of apples.

News

The next session of the General Medical Council will open on Tuesday, Nov. 28, at 2 P.M., when Prof. David Campbell, the president, will deliver an address.

In England and Wales notifications of poliomyelitis in the week ended Oct. 21 were: paralytic 197 (223), non-paralytic 81 (85); total 278 (308). The figures for the previous week are in parentheses.

Prof. H. N. Green is to deliver the John Burns lecture to the Royal Faculty of Physicians and Surgeons, 242, St. Vincent Street, Glasgow, C.2., on Wednesday, Nov. 15, at 5 P.M. He is to speak on the Fundamental Nature of Shock.

On Wednesday, Nov. 22, at 6.30 P.M., Sir Lionel Whitby is to deliver the Hastings lecture at B.M.A. House, Tavistock Square, London, W.C.1. His subject is to be Can Disease be Prevented? The lecture is open to the public, and tickets may be obtained from the public relations department at B.M.A. House.

General practitioners staffing the Kingston and Malden Victoria Hospital have announced that they will ignore the management committee's instruction that no further patients shall be admitted after Oct. 31. The committee intends to convert this hospital into a gynæcological unit, thus increasing the maternity beds at the nearby General Hospital.

The British Postgraduate Medical Federation offers travelling fellowships to doctors training as specialists who hold an appointment or are engaged in postgraduate study at one of the London undergraduate or postgraduate teaching hospitals. Applications should be sent to the secretary of the federation, 3, Gordon Square, W.C.1., before Dec. 1.

At a conference in London on Oct. 24, Prof. A. L. Goodhart, K.C., pointed out that last year 3955 car-drivers had been found guilty of reckless or dangerous driving; yet only 358 had been disqualified. The feebleness of the magistrates was shown by the fact that the 1682 convictions for driving under the influence of drink or drugs led to only 54 prison sentences without the option of a fine. Mr. Kingsley Martin, editor of the *New Statesman*, did not see why withdrawal of licence should not be automatic in many cases, and prison the rule for dangerous driving.

The eighth reunion of the Association of Army Psychiatrists will be held at Slater's Restaurant, 142, Strand, London, W.C.2, on Saturday, Nov. 18, at 7.30 P.M. Further particulars may be had from Dr. J. C. Penton, 1, Gatehill Road, Northwood, Middlesex.

Normally sickness benefit must be claimed within three days of the onset of the disability unless good cause can be shown for failure to do so. Under provisional regulations made by the Ministry of National Insurance, a patient who is in hospital for not less than three months will be deemed, during the first three months, to have good cause for failing to notify his incapacity or to claim sickness benefit. For the short-stay patient the concession will end three weeks after his discharge from hospital. The concession does not extend to patients admitted or transferred to a home or other institution for convalescence. If there have been two or more periods in hospital each separated by not more than three weeks, the period of deemed good cause will start at the earliest admission date.

Regional hospital boards have been reminded in a Ministry of Health circular (R.H.B. [50] 105) that "any tendency towards too large a professional or staff element" in the membership of hospital management committees should be avoided. In the Minister's view, boards should not appoint a management committee's officers as members even of another committee unless there are exceptionally strong reasons for doing so. In laying down general principles for the filling of vacancies on committees, the Minister last year declared that "medical and dental members should normally be derived as implied by the Act, from names proposed by the hospital staffs and not from other sources" (R.H.B. [49] 143; see *Lancet*, 1949, ii, 951). This, it is now explained, was not intended to imply the complete exclusion of medical or dental members from other sources. "Where a Board wish to include a general practitioner among the professional members, they will no doubt consider any names put before them by the Executive Council, whom they are in any case obliged to consult, or by the Local Medical or Dental Committee."

ACADEMIC AND EDUCATIONAL

Empire Rheumatism Council: **Post-graduate weekend course at Apothecaries' Hall, Nov. 17–19. Fee 2 gns., with application to Gen. Secretary, Tavistock House (N), Tavistock-square, W.C.1.**

Royal College of Surgeons of England: **Final F.D.S. examination starts Dec. 13; L.D.S. (Dental Prosthetics and Properties of Dental Materials) Nov. 29, (General and Special Anatomy and Physiology) Dec. 7.**

Conjoint Board in England: Pre-medical examination starts Dec. 14; 1st (Anatomy, Physiology, and Pharmacology) Dec. 7; Final (Pathology, Medicine, Surgery, and Midwifery) Jan. 2.

Glasgow University: Whole-time Sr. Lecturer in Medicine. Will be graded Consultant and appointed Asst. Phys. Western Infy. (University Clinical Scale max. £2000.) Apply to Secretary (closing date Nov. 25).

Glasgow University: Lecturer in Psychological Medicine (maximum £1500). Apply to Secretary (closing date Nov. 15).

London University, King's College: Lecturer in Physiology. (£600–£50–£750.) Apply to Registrar (closing date Nov. 25).

St. Andrew's University: James Mackenzie Professor of Child Health, in Senior Medical School, Dundee. (£2750.) Apply to Secretary (closing date Jan. 15).

LIST OF HOSPITAL VACANCIES

(Further particulars of appointments available on request to Advertisement Manager)

Acton, W.3.—Res. H.O.

Albert Dock Orth. & Frac., E.16.—Receiving Room O. (Jr. Reg.).

Bolingbroke, S.W.11.—H.S. (2nd or 3rd post).

Charing Cross Group.—P.-t. Cons. Phys. (i/c Dept. Phys. Med.), Wembley Hosp.

Connaught, E.17.—Dep. R.S.O. & Cas. O. (Jr. Reg.); H.S.

Elizabeth Garrett Anderson, N.W.1.—1st H.P. (med. & pæd.), Female.

Finchley Mem., N.12.—Res. H.P. (3rd or subsequent post).

German, E.8.—H.S.; H.S. (obst. & gyn.), 2nd or 3rd post.

Hackney, E.9.—H.P.; Cas. O. (2nd or 3rd post).

Hosp. for Sick Children, W.C.1.—P.-t. Sr. Reg. (derm.).

Hosp. for Sick Children, W.C.1.—2 H.P.s (Jr. Reg.s); H.S. (Jr. Reg.).

Hosp. for Women, W.1.—Res. Jr. Reg.

Lambeth, S.E.11.—Sr. Med. Reg.

London Jewish, E.1.—H.S. (H.O.).

London Chest, E.2.—Cons. Radiol. (Dpt. of Radiol.).

London Chest, E.2.—Res. M.O. (Jr. Reg., Reg., or Sr. Reg.).

London, E.1.—P.-t. Reg. (ophth.); Reg. (anæs.).

London Lock, W.1.—Reg.; P.-t. Sr. Reg.

Mile End, E.1.—H.P. (H.O.).

Mile End, E.1.—H.S. (H.O. 2nd post), Obst. Dpt.

National Temperance, N.W.1.—Cas. O. (Jr. Reg.).

National Temperance, N.W.1.—H.P. (gen.).

National Heart, W.1.—Res. M.O. (Jr. Reg. or Reg.), Male; H.P. (3rd post), Male, Maid's Moreton, Bucks.

N. Middlesex, N.18.—Jr. Reg. (anæs.).

N.E. Met. R.H.B.—Dep. Sr. M.O. (admin. & exec. duties).

N.W. Met. R.H.B.—Sr. Reg. (rad.).

Paddington, W.9.—3 H.P.s (gen.); 2 H.S.s (gen.); H.S. (obst. & gyn.).

Paddington, W.9.—Reg. (obst. & gyn.); H.P. (mainly T.B.).

Poplar, E.14.—H.S.

Princess Beatrice, S.W.5.—Obst. H.S. & C.O. (2nd or 3rd post).

Queen Mary's Hosp. for E. End, E.15.—Res. Obst. H.S. (3rd post).

Queen Mary's Hosp. for E. End, E.15.—P.-t. Clin. Asst. to Phys. Diabetic Dpt.

Putney, S.W.15.—Res. H.P. (Male).

Royal Free, W.C.1.—Orth. Reg. (Sr. Reg.).

Royal London Homœopathic, W.C.1.—H.S. (gyn. & surg.), 1st post.

Royal Masonic, W.6.—Res. Jr. Med. Reg.

Royal Northern, N.7.—H.S. (2nd or 3rd post).

South London for Women & Children, S.W.4.—Res. M.O. (Jr. Reg.), Female.

St. Peter's & St. Paul's, W.C.2.—P.-t. Cons. Rad.

St. Charles', W.10.—2 H.P.s (gen.); H.P. (T.B.); 2 H.S.s (gen.).

St. George in the East, E.1.—Jr. Reg. (C.O.).

St. Alfege's, S.E.10.—H.S. (Special & Gen. Dpts.), 2nd or 3rd post.

St. Clement's, E.3.—H.O. (Observation Wards & Psych. Unit).

St. John's, S.W.11.—Jr. Reg. (geriatric).

St. Mary's, W.2.—P.-t. Cons. Rad. (Princess Louise).

S.W. Met. R.H.B.—Reg. E.N.T. (Wandsworth Group).

S.E. Met. R.H.B.—P.-t. Cons. Phys. (Seamen's Group).

West London, W.6.—H.S. (gen. & gyn.); H.S. (gen. & g.-u.).

Provincial

Ashton, Hyde & Glossop H.M.C.—H.S. (orth.).

Aylesbury, Royal Bucks.—H.S. (E.N.T. & ophth.).

Aylesbury, Tindal Gen.—Res. Surg. O. (Jr. Reg.), Male.

Barnsley. St. Helen.—Jr. H.M.O.

Barrow-in-Furness. N. Lonsdale.—Res. H.S.

Barnet, Gen.—H.S. (1st post).

Bath. Royal Nat. for Rheumatic Diseases.—H.P.

Beckenham, Kent.—H.S.

Bexhill, Sussex.—H.S. (H.O. 1st post).

Bishop's Stortford & Dist.—Res. H.O. (1st or 2nd post), Male.

Bishop's Stortford. Haymeads.—Jr. Reg. (surg.); H.O. (cas.).

Birmingham. Dudley Road.—Surg. H.O.; H.O. (pæd.).

Blackpool. Victoria.—H.S. (Surg. Unit).

Birmingham United. Queen Eliz.—Non-res. Med. Reg. (Reg. or Sr. Reg.).

Birmingham. Royal Orthopædic.—Res. H.O. (2nd or 3rd post); Locum Jr. H.M.O.

Bovey Tracey, Devon. Hawkmoor San.—Res. H.S. (thor. surg.).

Bradford Royal Infy.—Reg. (orth.).

Bridgend Gen.—R.S.O. (orth.), Jr. H.M.O.; H.P.; H.S.

Bristol United Hosps.—Sr. Reg. (clin. path.).

Bristol. Winford Orth.—H.S.

Bromsgrove. Lea Colony.—Jr. H.M.O.

Bromsgrove. Barnsley Hall.—Jr. Reg.

Bromley, Kent.—H.S.; H.P.

Bury Gen.—Jr. Anæs. Reg.

Bury Gen.—Cas. O.; H.S.

Bury Gen.—H.P.

Bury St. Edmund's. W. Suffolk Gen.—H.S. (gen. surg.); H.P. (pæd. & gen. med.).

Burley-in-Wharfedale. Scalebor Park.—Jr. Reg. (psych.).

Burnley Gen.—Res. H.O. (med.).

Burnley Gen.—Jr. E.N.T. Reg.

Burnley. Victoria.—Jr. Orth. Reg.

Burton/Trent. Gen. Infy.—H.S.

Colchester. Essex County.—2 H.S.s.

Colchester. Myland.—Res. H.P.

Chertsey. St. Peter's.—Res. H.S. for Gyn. & Special Depts.

Canterbury. Kent & Canterbury.—E.N.T. & Eye. H.S. (2nd or 3rd post).

Chester Royal Infy.—M.O. (Jr. H.M.O.), orth. & cas.

Cambridge. Fulbourn (Mental).—Jr. H.M.O. (tempy.).

Cambridge. United Hosps.—Res. Obst. O. (H.O.), Maty. Hosp.

Carmarthen. West Wales Gen.—H.S.; R.S.O.

Chelmsford & Essex & St. John's.—H.S. (Spec. Depts.).

Coventry & Warwick.—H.S. (gen. surg.).

Dewsbury Gen.—H.O. (derm.).

Darlington Mem.—Res. Anæs. (Jr. Reg.); C.O. (H.O.); E.N.T. Reg.

Doncaster. Royal Infy.—Jr. Reg. (E.N.T.).

Enfield. Chase Farm.—Res. H.S. (gen. surg.), 1st post; Res. H.S. (gen. surg. & orth.), 1st post; Res. H.P. (gen. med. & pæd.), 1st post.

Exeter. Royal Devon & Exeter.—R.S.O. (Jr. Reg.).

Epsom, Surrey, Long Grove.—2 Reg.s; 2 Sr. Reg.s (psych.).
E. Anglian R.H.B.—Reg. (path.), Ipswich Area.
Grantham & Kesteven Gen.—R.S.O. (Jr. H.M.O.).
Guildford. Royal Surrey County —Cas. O. (Jr. Reg.); E.N.T. H.S. & Part. Cas. O.
Guildford, St. Luke's.—Res. H.O (Rad. Unit), 2nd or 3rd post.
Glasgow. Shieldhall Fever.—Res. M.O. (H.O. or Jr. H.M.O.).
Grimsby Gen.—Res. Anæs. (Jr. H.M.O.).
Hillingdon, Middx.—Res. H.S. (gen. surg. & g.-u.), Male.
Hillingdon, Middx.—Non-res. Reg. (cas.).
Huddersfield Royal Infy.—Rad. Reg.; E.N.T. Reg. (Jr. Reg.).
Haverfordwest. Pembroke County War Mem.—R.S.O.; H.S.
Halifax Royal Infy.—Res. Anæs.
Halifax Royal Infy.—Jr. Reg. (surg.).
Halifax Gen. Jr. Reg. (surg.); H.S.
Halifax. St. John's.—H.P.
Hertford County.—Jr. Reg. (surg.).
Hounslow, Middx.—Res. H.S. (Special Dpts.), 2nd or 3rd post.
Hull. De la Pole.—H.O. (2nd or 3rd post).
Hull. Royal Infy.—H.S.
Isleworth. W. Middlesex.—H.O. (orth.).
Isleworth. W. Middlesex.—Sr. Pæd. Reg.
Keighley & Dist. Victoria.—H.P.
Keighley & Dist. Victoria.—H.S.
Kettering Gen.—H.S. (traum. & orth.).
Leamington Spa. Warneford Gen.—R.H.S. (E.N.T. & ophth.), 2nd or 3rd post.
Leeds R.H.B.—Reg.s (chest diseases), Hull & Bradford; Sr. Reg. (psych.), Menston.
Leeds R.H.B.—Psych.s (Sr. H.M.O.s): Menston, Leeds; Bootham Park, York; Storthes Hall, Kirkburton; Stanley Royd, Wakefield.
Leeds R.H.B.—Cons. Bact. (Hull Royal Infy.).
Leeds R.H.B.—Cons. Radiol.s: Harrogate & Ripon; Hull A & B & E. Riding; Pontefract & Castleford.
Leeds R.H.B.—P.-t. Cons. Pæd. (Huddersfield & Halifax).
Leeds R.H.B.—Cons. Path. (Goole, Howden & Selby, Pontefract & Castleford).
Leeds R.H.B.—Cons. Bact. (Bradford A & B).
Leeds. Gen. Infy.—Reg. or Sr. Reg. (anæs.).
Leeds. Gen. Infy.—H.O.s (ophth. & gyn.); Reg. & Sr. Reg. (National Radioth. Centre).
Leeds United Hosps.—R.M.O. (H.O.), Ida Branch Hosp.
Leeds. St. James's.—Jr. Reg. (orth.).
Leicester. Markfield San. & Isolation.—Res. Reg.
Lincoln. County.—H.O. (orth. & frac.).
Lincoln. County.—H.S. (1st post).
Liverpool. Royal Southern.—Cas. O. (night duty).
Liverpool. City Hosp. North.—R.M.O. (H.O.), mainly med.
Liverpool. Heart.—Res. H.P.
Liverpool. Chest.—Res. Jr. H.P.
Maidstone. Preston Hall, British Legion Village.—Reg. (chest dis.).
Manchester R.H.B.—Cons. Path. (Ashton, Hyde, & Glossop).
Manchester R.H.B.—2 Sr. Reg.s (thor. surg.), Baguley and Park Hosps.
Manchester R.H.B.—Reg. (thor. surg.), Park Hosp.
Manchester R.H.B.—Asst. Anæs.s (Sr. H.M.O.s), Barrow and Furness; Wigan & Leigh and Wrightington.
Manchester R.H.B.—Cons. E.N.T. Surg. (Oldham & District, & Ashton, Hyde & Glossop).
Manchester R.H.B.—T.B. Phys. (Sr. H.M.O.), Manchester Chest Clinic.
Manchester R.H.B.—Cons. Chest Phys. (Manchester Chest Clinic and Baguley Hosp.).
Manchester R.H.B.—Cons. Ophth. Surg. (Blackburn & Dist.).
Manchester. Baguley.—Res. Jr. Med. Reg.
Manchester Royal Eye.—H.S.
Mansfield & Dist. Gen.—Sr. H.S. (acc. & orth.).
Middlesbrough. Poole San.—Res. Jr. Reg.
Motherwell. Strathclyde (I.D.).—H.O.
Norwich. Norfolk & Norwich.—Sr. Cas. O. (Jr. Reg.).
Norwich United Hosps.—Obst. H.S. (West Norwich Hosp.).
Norwich. Jenny Lind Hosp. for Children.—H.S.
Nottingham Gen.—Aural H.S.; Jr. Aural Reg.; Sr. Res. C.O. (H.O.), 2nd or 3rd post.
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Newport, I.W. St. Mary's.—H.P.; H.S.
Otley Gen.—H.P.
Oxford. Warneford & Park.—Sr. Reg.
Oxford R.H.B.—Cons. Accid. & Orth. Surg., High Wycombe & Amersham.
Oxford R.H.B.—Cons. Phys. Med. (Swindon, Cirencester & Pewsey).
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